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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,940

04/24/2006

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33082M320

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441 7590 06/09/2009

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EXAMINER

CHANDRA, SATISH

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

06/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,940	Applicant(s) HONMA ET AL.	
	Examiner SATISH CHANDRA	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4 - 12 is/are pending in the application.
- 4a) Of the above claim(s) 5 - 7, 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/06, 8/06, 9/06, 10/07, 6/08, 9/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okase (US 5,329,095) in view of Shimazu et al (US 6,283,175), Takayashu et al (JP 2003-257958) and Kenichi (JP 07-029841).

Okase discloses:

Regarding claim 4, a longitudinal type of thermal processing apparatus (Fig 1) comprising: a processing container 21 (Column 3, lines 57 – 67) made of quartz, having an opening part 23 at a lower end thereof, a lid body 26 (Column 4, lines 7 – 11) provided under the opening part, capable of moving up and down so as to open and close the opening part 23, a holder 24 (quartz boat) provided on the lid (Column 4, lines 11 - 17), capable of hold a plurality of wafers to be processed in a tier-like manner, and a heating unit 22 (coil shaped heater) provided around the processing container, wherein the lid has an inner lid part 26b (Fig 2, Column 5, lines 12 – 15)) made of quartz that comes in contact with a lower- end surface of the opening part, and an outer lid part 26d (Column 5, lines 23 – 26) made of a metal, SUS that covers an outside surface of the inner lid part.

Okase does not disclose:

Regarding claim 4, an outer-periphery upper portion of the inner lid part is located inside an outer- periphery edge of the lower-end surface of the opening part; and the lower-end surface of the opening part and the upper-end surface of the inner lid part, which come in contact with each other, are mirror finished.

Shimazu discloses:

Regarding claim 4, the flange 12 (first flange) is provided with first mirror surface 49a having an annular or looped shape arranged on the inner side and the flange 6a (2nd flange) is provided with a second mirror surface 49b (Column 7, lines 13 – 31) at the outside periphery of the inner lid part (Fig 1, extension of lid 6 attaching with flange 12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a flange wherein the lower-end surface of the opening part (first flange) and the upper-end surface of the inner lid part (2nd flange) are mirror finished in the apparatus of Okase as taught by Shimazu.

The motivation for providing a flange wherein the lower-end surface of the opening part (first flange) and the upper-end surface of the inner lid part (2nd flange) are mirror finished in the apparatus of Okase is to provide an alternate and equivalent sealing mechanism in the apparatus of Okase as taught by Shimazu.

Okase and Shimazu do not disclose: regarding claim 4, a first flange is provided at an outside periphery of the opening part, the first flange is located higher than the lower-end surface of the opening part, a second flange is provided at an outside periphery of the inner lid part, the second flange is located lower than the upper-

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end surface of the inner lid part, a flange holder is provided between the first flange and the second flange, and a channel for vacuuming is formed by: an inner surface of the flange holder, a lower surface of the first flange, an upper surface of the second flange, an outer surface of the inner lid part from the second flange to the upper-end surface, and an outer surface of the opening part from the lower-end surface to the first flange.

Takayashu et al discloses: regarding claim 4, a flange 4a (first flange, Fig 1) is provided at an outside periphery of the opening part, the first flange is located slightly higher than the lower end surface of the opening part and a flange attachment component (flange holder) is disposed for holding the flange.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an upper flange with a lower portion comprising a first flange located slightly higher than the lower end surface of the opening part and a flange attachment in the apparatus of Okase and Shimazu as taught by Takayashu et al.

The motivation for providing an upper flange with a lower portion comprising a first flange located slightly higher than the lower end surface of the opening part and a flange attachment in the apparatus of Okase and Shimazu is to provide an alternate and equivalent arrangement of upper flange in their apparatus as taught by Takayashu et al.

Okase, Shimazu and Takayashu do not disclose: regarding claim 4, a second flange is provided at an outside periphery of the inner lid part, the second flange is located lower than the upper-end surface of the inner lid part, a flange holder is provided between the first flange and the second flange, and a channel for vacuuming is

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formed by: an inner surface of the flange holder, a lower surface of the first flange, an upper surface of the second flange, an outer surface of the inner lid part from the second flange to the upper-end surface, and an outer surface of the opening part from the lower-end surface to the first flange.

Kenichi discloses: regarding claim 4, a second flange (not labeled, Fig 5; extension on the other side of the raised portion) provided at an outside periphery of the inner lid part 26, the second flange is located lower than the upper end surface (not labeled) of the inner lid part 26. Kenichi also discloses a first flange 34A is provided higher than the lower portion of the opening area. A flange attachment 54 (Fig 2) is disposed between the first flange 34A and the second flange (not labeled, extension on the other side of the raised portion, Fig 5) of the lid part 26. Kenichi further discloses a channel (annular groove 150, Fig 5) is formed between the first flange 34A and groove 102 is formed in the second flange of the lid 26 connected to a vacuum pump 108.

Therefore, It would also have been obvious to one of ordinary skill in the art at the time the invention was made to provide a flange at an outside periphery of the opening part of the processing chamber, the first flange is located slightly higher than the lower end surface of the opening part, a second flange located lower than the upper end surface (raised portion) and comprising a flange attachment for holding the flange in the apparatus of Okase, Shimazu and Takayashu as taught by Kenichi et al.

It would also be obvious to a skilled artisan at the time the invention was made to provide a flange holder between the first flange and the second flange in the apparatus of Okase, Shimazu and Takayashu as taught by Kenichi et al.

It would also be obvious to one of ordinary skill in the art at the time the invention was made to provide a groove for vacuuming formed by the inner surface of the flange attachment (flange holder), a lower surface of the first flange and an upper surface of the second flange, an outer surface of the inner lid part and an outer surface of the inner part from the lower end surface of the first flange in the apparatus of Okase, Shimazu and Takayashu as taught by Kenichi et al.

The motivation for providing a flange at an outside periphery of the opening part of the processing chamber, the first flange is located slightly higher than the lower end surface of the opening part, a second flange located lower than the upper end surface (raised portion) and comprising a flange attachment for holding the flange in the apparatus of Okase and Shimazu is to provide an alternate and equivalent arrangement of attachment in the apparatus of Okase and Shimazu as taught by Kenichi.

The motivation for providing a flange holder between the first flange and the second flange in the apparatus of Okase, Shimazu and Takayashu is to hold the first and second flange together in the apparatus of Okase, Shimazu and Takayashu.

The motivation for forming a plurality of grooves for vacuuming formed between the inner surface of the flange attachment (flange holder), a lower surface of the first flange and an upper surface of the second flange, an outer surface of the inner lid part and an outer surface of the inner part from the lower end surface of the first flange in the apparatus of Okase and Shimazu connected to a vacuum pump is to draw any leakage in the apparatus of Okase and Shimazu as taught by Kenichi.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okase (US 5,329,095) in view of Shimazu et al (US 6,283,175) and Shimazu et al (US 6,030,457).

Okase discloses:

Regarding claim 8, a longitudinal type of thermal processing apparatus (Fig 1) comprising: a processing container 21 (Column 3, lines 57 – 67) made of quartz, having an opening part 23 at a lower end thereof, a lid body 26 (Column 4, lines 7 – 11) provided under the opening part, capable of moving up and down so as to open and close the opening part 23, a holder 24 (quartz boat) provided on the lid (Column 4, lines 11 - 17), capable of hold a plurality of wafers to be processed in a tier-like manner, and a heating unit 22 (coil shaped heater) provided around the processing container, wherein the lid has an inner lid part made of quartz that comes in contact with a lower-end surface of the opening part, and an outer lid part made of a metal, SUS (Column 4, lines 50 – 67) that covers an outside surface of the inner lid part.

Okase does not disclose:

Regarding claim 8, an outer-periphery upper portion of the inner lid part is located inside an outer- periphery edge of the lower-end surface of the opening part; and the lower-end surface of the opening part and the upper-end surface of the inner lid part, which come in contact with each other, are mirror finished.

Shimazu ('175) discloses:

Regarding claim 8, the flange 12 is provided with first mirror surface 49a having an annular or looped shape arranged on the inner side and the flange 6a is provided

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with a second mirror surface 49b (Column 7, lines 13 – 31). The lid 6 (inner lid) is located inside the outer periphery edge of the tray 58 (Fig 1). Shimazu ('175) further discloses: a flange 6 (lid) comprising a boss 68 integrally formed with the flange 6 wherein the boss 68 surrounds the rotational mechanism 59 and boss 68 is supported by the flange 61 of the rotational mechanism 59 (Fig 1). Flange 61 is fixed on the lower surface of the central opening so as to close the central opening part. Providing a plurality of o-rings between flanges is well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a lid made of quartz comprising an inner part located inside the outer periphery edge of outer lid made of metal in the apparatus of Okase as taught by Shimazu ('175); provide a flange wherein the lower-end surface of the opening part and the upper-end surface of the inner lid part are mirror finished in the apparatus of Okase as taught by Shimazu ('175).

it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a flange fixed on the lower surface of the central opening so as to close the central opening part in the apparatus of Okase as taught by Shimazu ('175).

The motivation for providing a lid made of quartz comprising an inner part located inside the outer periphery edge of outer lid made of metal in the apparatus of Okase is to optimize the lid material in the apparatus of Okase as taught by Shimazu ('175).

The motivation for providing mirror finished surfaces in a flange in the apparatus of Okase is to provide an alternate and equivalent sealing mechanism in the apparatus of Okase as taught by Shimazu ('175).

The motivation for provide a flange fixed on the lower surface of the central opening so as to close the central opening part in the apparatus of Okase is to provide a flange for closing the opening in the apparatus of Okase as taught by Shimazu ('175).

Okase et al and Shimazu et al ('175) do not disclose:

Regarding claim 8, a gas-discharging hole for vacuuming a space defined by the lower-end surface of the boss part.

Shimazu et al ('457) discloses: in Fig 2, a lid 3 provided with a central hole 32 and an annular boss (not labeled) formed integrally on the lower surface of the flange surrounding the hole 32. A tubular casing 5 of stainless steel is joined to the lower surface of the flange 33 with an o-ring 5a compressed there between. A tubular member 30 of a stainless steel fitting is fitted in a bore defined by the annular boss and the flange 33. A circular evacuating groove 51 is formed in the surface of the casing 5 contiguous with the lower surface of the flange 33.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a gas discharging hole for vacuuming a space defined by the lower end surface of the boss of the flange in the apparatus of Okase et al and Shimazu et al ('175) as taught by Shimazu et al ('457). It would have been obvious to a skilled artisan to combine prior art elements to yield predictable results such as providing a gas discharging hole for vacuuming a space defined by the lower

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end surface of the boss of the flange in the apparatus of Okase et al and Shimazu et al ('175) as taught by Shimazu et al ('457).

The motivation for providing a gas discharging hole for vacuuming a space defined by the lower end surface of the boss of the flange in the apparatus of Okase et al and Shimazu et al ('175) is to prevent gases emanating from the o-ring 5a from leaking into a processing chamber by evacuating through the evacuating passage in the apparatus of Okase et al and Shimazu et al ('175) as taught by Shimazu et al ('457).

Response to Arguments

Applicant's arguments filed 2/19/2009 have been fully considered but they are not persuasive.

Regarding the arguments:

Claim Rejections 35 U.S.C. § 103(a)

Claim 4 stands rejected as being unpatentable over Okase (US 5,329,095) in view of Shimazu et al. (US 6,283,175) in view of Takayasu et al. (JP 2003-257958) in view of Kenichi (JP 07-029841). The rejection as to claim 4 is respectfully traversed.

The Office Action admits that Okase, Shimazu ' 175 and Takayasu do not disclose or suggest (i) a second flange provided at an outside periphery of the inner lid part, the second flange is located lower than the upper-end surface of the inner lid part, (ii) a flange holder is provided between the first flange and the second flange, and (iii) a channel for vacuuming is formed by: an inner surface of the flange holder, a lower surface of the first flange, an upper surface of the second flange, an outer surface of the inner lid part from the second flange to the upper-end surface, and an outer surface of the opening part from the lower-end surface to the first flange. The Office Action relies on Kenichi's alleged second flange (not labeled, Fig. 5), flange holder, channel and a lid 26 connected to a vacuum pump, respectively, to purport that it would have been prima facie obvious to one of ordinary skill in the art to provide a "different", "an alternate and equivalent arrangement of flanges" and to "draw any leakage" in the apparatus of modified Okase; (See Page 5 of OA).

Applicants respectfully assert that Kenichi fails to teach or suggest a second flange in Fig 5, as recited, and thus, the combination of Claim 4 would not have been prima-facie obvious to one having ordinary skill in the art. First, the Office Action on Page 4 states that the second flange in Kenichi is not labeled in FIG. 5 and that it is "located lower than the upper end surface (not labeled) of the inner lid part 26"; (Applicants' emphasis added). An objective study of Kenichi FIG. 5 illustrates only one (1) lid 26 comprising a single material, and thus, fails to suggest an inner lid part made of quartz and an outer lid part made of metal. Further, because the second flange is not labeled in Kenichi FIG. 5 and the Japanese Abstract does not describe a second flange or an inner lid part, Kenichi fails to disclose "a second flange is provided at an outside periphery of the inner lid part" as recited. Accordingly, claim 4 patentably distinguishes thereover.

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The Examiner disagrees: Kenichi discloses a second flange (not labeled, Fig 5; extension on the other side of the raised portion of the lid 26) provided at an outside periphery of the inner lid part 26, the second flange is located lower than the upper end surface (not labeled, extension on the other side of the raised portion of the lid 26 in Fig 5) of the inner lid part 26. A first flange 34A is provided higher than the lower portion of the opening area (Fig 5). A flange attachment 54 (Fig 2) is disposed between the first flange 34A and the second flange (it is attached to the portion 44 in Fig 2) of the lid part 26, which reads on the claimed language of claim 4. Kenichi further discloses a channel (annular groove 150, Fig 5) is formed between the first flange 34A and groove 102 is formed in the second flange of the lid 26 connected to a vacuum pump 108. Fig 5 of Kenichi is being reproduced here for applicant's clarity.

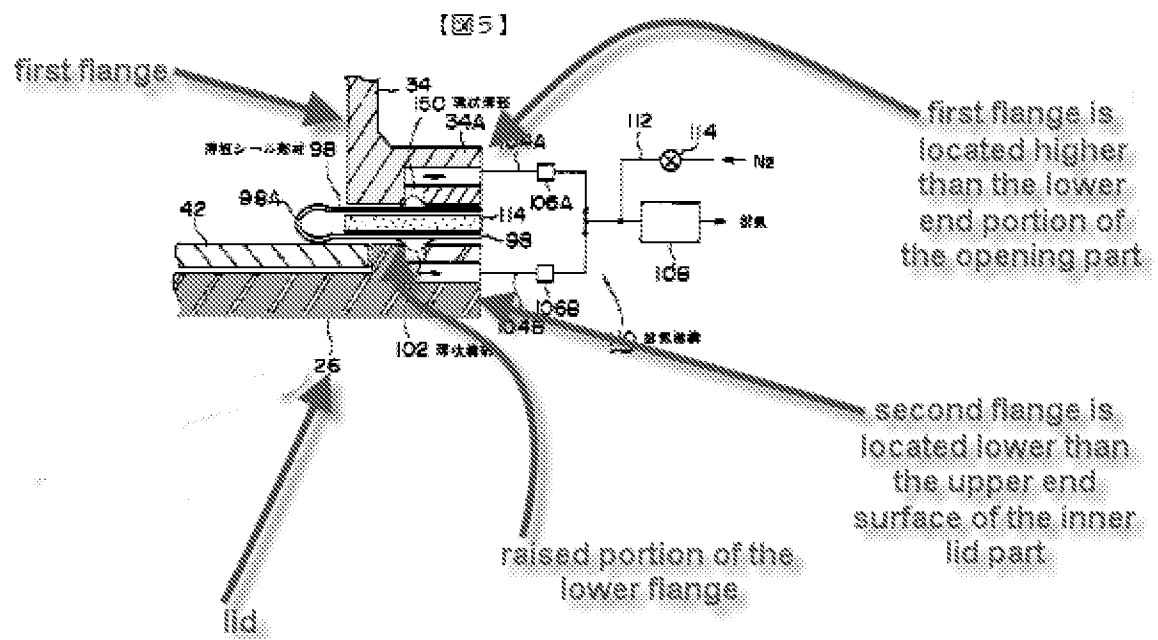


Fig 3 of Kenichi

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a flange at an outside periphery of the opening part of the processing chamber, the first flange is located slightly higher than the lower end surface of the opening part, a second flange located lower than the upper end surface (raised portion) and comprising a flange attachment for holding the flange in the apparatus of Okase and Shimazu as taught by Kenichi et al.

It would also be obvious to one of ordinary skill in the art at the time the invention was made to provide a groove for vacuuming formed by the inner surface of the flange attachment (flange holder), a lower surface of the first flange and an upper surface of the second flange, an outer surface of the inner lid part and an outer surface of the inner

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part from the lower end surface of the first flange in the apparatus of Okase and Shimazu as taught by Kenichi et al.

Regarding the arguments:

Second, Applicants assert that flange attachment 54, per FIG. 2 of Kenichi, is disposed above the first flange 34A and the lid part 26. However, it is clear that the flange attachment 54 (Kenichi Fig. 2) is disposed above the first flange 34A and the lid part 26, and not between the first flange 34A and the lid part 26; (Applicants' emphasis added). Thus, Kenichi fails to disclose "a flange holder is provided between the first flange and the second flange". As such, claim 4 further patentably distinguishes thereover.

The Examiner disagrees: the flange attachment (flange holder) 54 in Fig 2 of Kenichi extends from the first flange 34A which is provided higher than the lower portion of the first flange (Fig 5) to the lid portion 26 which reads on the claimed invention of the claim. The flange portion is in the middle of the first flange and the second lower flange (Fig 2 of Kenichi).

Regarding the arguments:

Further, the Office Action states that FIG. 5 of Kenichi discloses an annular groove 102 formed between the first flange 34A and the second flange of the lid 26 connected to a vacuum pump 108. An objective study of FIG. 5 discloses a groove 102 formed in the lid 26. Another groove 150 is formed in the first flange 34A and two thin sealing members 98 separate the two grooves 102, 150. Thus, Kenichi fails to teach a channel between first flange 34A and lid 26. Consequently, the combination of references wholly fails to disclose or suggest "a channel for vacuuming is formed by." an inner surface of the flange holder, a lower surface of the first flange, an upper surface of the second flange, an outer surface of the inner lid part from the second flange to the upper-end surface, and an outer surface of the opening part from the lower-end surface to the first flange". Thus, claim 4 further patentably distinguishes thereover. In view of the foregoing, Applicants courteously solicit withdrawal and reconsideration of the rejection as to claim 4.

The Examiner again disagrees. Kenichi discloses in Fig 5 a plurality of grooves, an upper groove 150 and a lower groove 102. Both of these grooves have passages shown by arrows. The above groove and its passage is enclosed by the lower surface of the first flange, the inner surface of the flange attachment (though not shown in Fig 5). Similarly the lower groove 102 and its passage is enclosed by the upper surface of

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the second flange, the inner surface of the flange attachment and an outer surface of the lid 26 which reads on the claimed language of the claim 4. Therefore it would be obvious to a skilled artisan to combine the teachings of Kenichi into the teachings of Okase, Shimazu and Takayashu to yield predictable results such as providing grooves including passages (channels) in their apparatus.

Regarding the arguments:

II. Claim 8 stands rejected as being unpatentable over Okase (US 5,329,095) in view of Shimazu et al. (US 6,283,175) in view of Shimazu et al. (US 6,030,457). The rejection as to claim 8 is respectfully traversed.

The Office Action at Page 8 admits that Okase and Shimazu ' 175 do not disclose "a gas-discharging hole for vacuuming a space defined by the lower-end surface of the boss part". The Office Action relies on FIG. 2 of Shimazu '457 for providing "a gas-discharging hole for vacuuming a space defined by the lower end surface of the boss (not labeled) of the flange" and purports that it would have been obvious to combine prior art elements to yield predictable results in order to prevent the emanation of gases from the o-ring 5a from leaking into the processing chamber; (Applicants' observation "not labeled" added).

An objective study of Shimazu '457 as illustrated in FIG. 2 when combined with modified Okase fails to suggest to one of ordinary skill in the art that a vacuuming space is between, or rather, defined by, a lower end surface of the boss part, an upper surface of the flange and double o-rings (third and fourth o-rings). Applicants therefore assert that the Examiner may be utilizing impermissible hindsight in view of the Office Action's combination of Okase, Shimazu ' 175 and Shimazu '457.

In support, one of Applicants' exemplary objectives is to vacuum a space between the double o-rings, boss part and flange such that the out gas that flows inward from the outer o- ring can be easily discharged. See Page. 2, para. 21 of Applicants' Publication US 2007/0075086. Because the motivation to combine was derived from Applicants' invention, claim 8 would not have been rendered prima facie obvious to one of ordinary skill in the art. As such, claim 8 patentably distinguishes thereover. Accordingly, Applicants respectfully seek withdrawal and reconsideration of the rejection as to claim 8.

The Examiner disagrees.

The applicants in their arguments are using the word 'between' a lower end surface of the boss part, an upper surface of the flange and double o-rings. The claim language of claim 8 does not recite what the applicant is arguing about. The claim language of claim 8 recites 'a gas-discharging hole for vacuuming a space defined by the lower-end surface of the boss part, the upper surface of the flange and between O-rings of the pair'. The reference of Shimazu ('457) discloses in Fig 2, a circular

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evacuating groove 51 is formed in the upper surface of the casing 5 contiguous with the lower surface of the flange 33 of the boss. An o-ring 5a is compressed therebetween. It would have obvious to a skilled artisan to provide a pair of o-rings compressed therebetween instead of a single o-ring. It has been held the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a gas discharging hole for vacuuming a space defined by the lower end surface of the boss of the flange in the apparatus of Okase et al and Shimazu et al ('175) as taught by Shimazu et al ('457). It would have been obvious to a skilled artisan to combine prior art elements to yield predictable results such as providing a gas discharging hole for vacuuming a space defined by the lower end surface of the boss of the flange in the apparatus of Okase et al and Shimazu et al ('175) as taught by Shimazu et al ('457).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a -- reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SATISH CHANDRA whose telephone number is (571)272-3769. The examiner can normally be reached on 8 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Satish Chandra/
Examiner, Art Unit 1792

/Parviz Hassanzadeh/
Supervisory Patent Examiner, Art Unit 1792